

**BALTIMORE & OHIO RAILROAD COMPANY v.
GROEGER, ADMINISTRATRIX OF GROEGER.**

**CERTIORARI TO THE CIRCUIT COURT OF APPEALS FOR THE
SIXTH CIRCUIT.**

No. 113. Argued October 24, 1924.—Decided January 5, 1925.

1. Section 2 of the Boiler Inspection Act, in making it unlawful for any common carrier "to use any locomotive engine propelled by steam power . . . unless the boiler . . . and appurtenances thereof are in proper condition and safe to operate in the service to which the same is put, that the same may be employed in the active service of such carrier in moving traffic without unnecessary

- peril to life or limb,"—prescribes a sufficiently definite standard of duty. P. 523.
2. Under this section the carrier's duty to have the boiler in safe condition is absolute and continuing. P. 527.
 3. Where a breach of this duty is a contributing cause of an explosion resulting in the death of an employee, the carrier is liable under this Act, and the Employers' Liability Act, whether or not it had notice, actual or constructive, that the boiler was defective or unsafe. *Id.*
 4. Evidence considered and held sufficient to go to the jury on the question whether a defective or dangerous condition of the crown sheet was a contributing cause of the explosion of a locomotive boiler. P. 524.
 5. The carriers are left free to determine how their boilers shall be kept in the prescribed condition of safety, and are not required to furnish the best mechanical contrivances and inventions to that end or to discard appliances upon discovery of later improvements. P. 528.
 6. A charge authorizing a jury to decide that the standard of duty imposed by the Boiler Inspection Act required a fusible safety plug to be installed, and instructing them that in such case its absence would impose on the carrier an absolute liability,—*held* erroneous. P. 531.
- 288 Fed. 321, reversed.

CERTIORARI to a judgment of the Circuit Court of Appeals affirming a recovery against the railroad in an action under the Federal Employers' Liability and Boiler Inspection Acts.

Mr. W. T. Kinder, with whom *Mr. S. H. Tolles*, *Mr. J. P. Wood* and *Mr. J. W. Reavis* were on the brief, for petitioner.

Mr. E. C. Chapman for respondent.

MR. JUSTICE BUTLER delivered the opinion of the Court.

Respondent, administratrix of the estate of her deceased husband, John C. Groeger, brought this action against the petitioner in the district court for the northern

district of Ohio, to recover damages for his death. He was a locomotive engineer employed by the defendant, and at the time of his death, September 3, 1920, was operating a steam locomotive propelling an interstate train. He was killed by the explosion of the boiler. The action was brought under the Federal Employers' Liability Act of April 22, 1908, 35 Stat. 65, and the Federal Boiler Inspection Act of February 17, 1911, § 2, 36 Stat. 913, amended March 4, 1915, 38 Stat. 1192.

The court submitted for decision of the jury two issues: whether the explosion was caused in whole or in part by an unsafe and insufficient condition permitted by defendant in and about the crown sheet of the boiler; and whether defendant's failure to have a fusible plug in the crown sheet violated § 2 of the Boiler Inspection Act. There was a verdict and judgment for plaintiff. Defendant took the case to the Circuit Court of Appeals, where the judgment was affirmed. 288 Fed. 321.

1. Defendant asserts that § 2 of the Boiler Inspection Act prescribes no definite or ascertainable standard of duty. That section provides that it shall be unlawful "for any common carrier . . . to use any locomotive engine propelled by steam power . . . unless the boiler . . . and appurtenances thereof are in proper condition and safe to operate in the service to which the same is put, that the same may be employed in the active service of such carrier in moving traffic without unnecessary peril to life or limb. . . ." It imposes upon the carrier a higher degree of duty than theretofore existed. The requirement of the statute is substituted for the common law rule which holds the employer to ordinary care to provide his employees a reasonably safe place in which, and reasonably safe appliances and machinery with which, to work. It is as definite and certain as is the common law rule; and to hold that the duty imposed cannot be ascertained would be as unreasonable as it

would be to declare that the common law rule which is ordinarily applied in personal injury actions brought by employees against employers is too indefinite to be enforced or complied with. The contention is without merit.

2. Defendant insists that there was no evidence to support a finding that the explosion resulted from any defective or dangerous condition of the crown sheet.

The credibility of witnesses, the weight and probative value of evidence are to be determined by the jury and not by the judge. However, many decisions of this court¹ establish that, in every case, it is the duty of the judge to direct a verdict in favor of one of the parties when the testimony and all the inferences which the jury could justifiably draw therefrom would be insufficient to support a different finding.

¹ *Pawling v. United States*, 4 Cr. 219, 221; *United States v. Breitling*, 20 How. 252, 254-255; *Schuchardt v. Allens*, 1 Wall. 359, 369; *Merchants' Bank v. State Bank*, 10 Wall. 604, 637; *Improvement Co. v. Munson*, 14 Wall. 442, 448; *Pleasants v. Fant*, 22 Wall. 116, 121-122; *Herbert v. Butler*, 97 U. S. 319, 320; *Bowditch v. Boston*, 101 U. S. 16, 18; *Griggs v. Houston*, 104 U. S. 553; *Phoenix Ins. Co. v. Doster*, 106 U. S. 30, 32; *Russell v. Allen*, 107 U. S. 163; *Anderson County Commissioners v. Beal*, 113 U. S. 227, 241; *People's Savings Bank v. Bates*, 120 U. S. 556, 561-562; *North Penn. Railroad v. Commercial Bank*, 123 U. S. 727, 733; *Kane v. Northern Central Railway*, 128 U. S. 91, 94; *Dunlap v. Northeastern Railroad*, 130 U. S. 649, 652; *Delaware &c. Railroad v. Converse*, 139 U. S. 469, 472; *Texas & Pacific Ry. Co. v. Cox*, 145 U. S. 593, 606; *Elliott v. Chicago, Milwaukee & St. Paul Railway*, 150 U. S. 245; *Gardner v. Michigan Central Railroad*, 150 U. S. 349, 360; *Union Pacific Ry. Co. v. McDonald*, 152 U. S. 262, 283; *Southern Pacific Co. v. Pool*, 160 U. S. 438, 440; *Patton v. Texas & Pacific Railway Co.*, 179 U. S. 658; *Marande v. Texas & Pacific Ry. Co.*, 184 U. S. 173, 191; *McGuire v. Blount*, 199 U. S. 142, 148; *Empire State Cattle Co. v. Atchison Ry. Co.*, 210 U. S. 1, 10; *Delk v. St. Louis & San Francisco R. R.*, 220 U. S. 580, 587; *Slocum v. New York Life Insurance Co.*, 228 U. S. 364, 369.

The parts of the firebox and boiler involved may be described briefly. One side of the metal forming the top and sides of the firebox is exposed to the fire, and the other side forms a part of the boiler and, when the engine is in use, is covered by water. In order to strengthen and to hold in proper position the sides and top of the firebox in relation to the opposite exterior walls of the boiler, staybolts are used, extending from the inside of the firebox to the outside of the boiler. There were 1464 such bolts on the engine under consideration. The top of the firebox is called the crown sheet. It is kept covered with water while the engine is in operation; and if allowed to be without water thereon, it will become so overheated that damage or explosion will be liable to result. Fusible plugs are made of soft metal, which will melt at relatively low temperature. They may be, and sometimes are, inserted into and used as part of the crown sheet; and are so shaped and placed that the end of the plug inside the boiler extends slightly above the surface of the metal surrounding it. It is intended that, if the water on the crown sheet shall be too low, the fire will melt out the plug before greater damage or explosion results, and allow the steam to escape from the boiler into the firebox and so relieve the pressure and check or extinguish the fire.

Rule 25, approved by the Interstate Commerce Commission, is as follows: "No boiler shall be allowed to remain in service when there are two adjacent staybolts broken or plugged in any part of the firebox or combustion chamber, nor when three or more are broken or plugged in a circle four feet in diameter, nor when five or more are broken or plugged in the entire boiler." Rule 14 of the Commission is as follows: "If boilers are equipped with fusible plugs, they shall be removed and cleaned of scale at least once every month. Their removal must be noted on the report of inspection." This does not

purport to require fusible plugs to be used. There was none in the crown sheet in question. It was shown that the boiler had seven broken staybolts, and that they had been broken some time before the day the explosion occurred. Three were intermediate on one side within a radius of sixteen inches; three, two of which were adjacent, were intermediate on the other side within a radius of twelve inches, and one was at the front end of the crown sheet. Use of the boiler in that condition violated Rule 25. The evidence showed that overheating of the crown sheet has a tendency to injure and fracture staybolts; but it was not shown what caused these to break. All persons on the engine,—engineer, fireman and brakeman,—were killed. The train stopped at Foster's Tower, about three miles from the place of the explosion, and there water was taken into the tank. A brakeman employed on another train, then at that station, testified that he went into the cab of Groeger's engine, and that, while there, he observed that water and steam were escaping from the boiler into the firebox; that he heard the sizzling of the water upon the fire; that, when he opened the firebox door, steam gushed out; that the fire was dead; that the steam gauge showed 160 pounds pressure, and that water was being put into the boiler by the two injectors. There was no evidence that, prior to the day of the explosion, there was any improper or unsafe condition or defect in the boiler, other than the broken staybolts. The testimony of the locomotive engineers, who operated the engine several days immediately preceding the explosion, was to the effect that the injectors, gauge cocks, and water glass,—the means by which the supply of water in the boiler was controlled and observed,—were in good condition. The testimony of a number of witnesses, whose experience qualified them to give opinion evidence on the basis of conditions existing after the explosion, supported the defendant's contention that the

broken staybolts did not cause or have any connection with the explosion; and, as to that matter, there was no substantial conflict in the evidence. The location of these broken staybolts in relation to the place of the tear or rupture was shown to be such that the explosion was not caused by them. And we find no evidence in the record to support a finding that they caused or contributed to cause the explosion. But we agree with the Circuit Court of Appeals that, under § 2 of the statute, there was sufficient evidence to sustain the verdict, wholly apart from the broken staybolts. Defendant's duty to have the boiler in a safe condition to operate so that it could be used without unnecessary peril to its employees was absolute and continuing. No notice to the defendant, actual or constructive, of the defects or unsafe condition of the boiler was necessary to plaintiff's case. Defendant is liable if its breach of duty contributed to cause the death. We are bound to assume that the condition of the boiler at Foster, a very short time before the explosion, was as indicated by the testimony of the brakeman above referred to. His credibility and the weight properly to be given to his testimony were for the jury. And if the boiler was in the condition he described, it would not be unreasonable to conclude that a breach of duty of defendant caused or contributed to cause the explosion. We think it did not conclusively appear that the failure of deceased properly to operate the engine was the sole cause of the explosion. It follows that the evidence made a case for the jury.

3. The court, in harmony with the provisions of § 2, instructed the jury that the standard of defendant's duty was to put and keep the locomotive in proper condition and safe to operate, and that it would be a violation of defendant's duty if the engine, as to the crown sheet, was permitted to be in such a condition that it could not be employed in the active service of the carrier moving the

traffic without unnecessary peril to life or limb. And further instructed as follows: "If you shall say and find that the standard of duty imposed by the law required a fusible safety plug to be installed, then the absence of the fusible safety plug would impose upon the defendant here an absolute liability, and the plaintiff would be entitled to recover if the absence of it contributed in whole or in part to cause the explosion and the resulting death.

... An interstate carrier, as well as any railroad carrier, owes the duty, of course, of availing itself of the best mechanical contrivances and inventions in known practical use which are or would be effective in making safe a locomotive boiler as against explosions. It is not bound to introduce a new appliance the moment somebody suggests it or discovers it, but is entitled to a reasonable time and opportunity to test it out and make any changes.

... If you shall find ... that a fusible safety plug was required by that standard, and that it was a mechanical means and contrivance in known practical use and effective more than was any other that had been installed by the defendant on this engine, then its absence would be a violation of the Boiler Inspection Act . . ."

That act was passed to promote the safety of employees and is to be read and applied with the Federal Employers' Liability Act. Under the latter, defendant is liable for any negligence chargeable to it which caused or contributed to cause decedent's death (§ 1); and he will not be held guilty of contributory negligence (§ 3) or to have assumed the risks of his employment (§ 4) if a violation of § 2 of the Boiler Inspection Act contributed to cause his death. See *Great Northern Ry. Co. v. Donaldson*, 246 U. S. 121, 124; *St. Louis & Iron Mountain Ry. v. Taylor*, 210 U. S. 281, 294; *Louisville & Nashville R. R. Co. v. Layton*, 243 U. S. 617, 620.

By the last mentioned section, defendant was bound absolutely to furnish what before, under the common law,

it was its duty to exercise ordinary care to provide. The carriers were left free to determine how their boilers should be kept in proper condition for use without unnecessary danger. The things required for that purpose were not prescribed or changed by the act; but use of boilers unless safe to operate as specified was made unlawful, and liability for consequences follows violation of the act. It is a well established rule that the master is not bound to furnish the latest or best tools or appliances for the use of his servants. That rule is applicable here, and we hold that defendant was not liable for failure to furnish the best mechanical contrivances and inventions or to discard appliances upon discovery of later improvements, provided the boiler was in proper condition and safe to operate, as required by the statute. *Chicago & Northwestern Ry. Co. v. Bower*, 241 U. S. 470, 474; *Patton v. Texas & Pacific Ry. Co.*, 179 U. S. 658, 664; *Washington, &c. R. R. Co. v. McDade*, 135 U. S. 554, 570.

The jury was by the charge authorized to find that the act required defendant to have a fusible plug in the crown sheet of the boiler. There is nothing in the act or in any rule, regulation or order authorized by it, which specifies the use of fusible plugs. This, however, does not relieve the defendant of the duty to have and keep its boilers safe for use as required by the act. *Great Northern Ry. Co. v. Donaldson*, *supra*, 128. The use of fusible plugs has been known for a long time. The record does not contain a complete showing of the extent of their use; but it appears that the Erie Railroad uses them, and that for some years defendant used them; that defendant has now about 2,700 locomotives, and does not have fusible plugs in any of them; and it was shown that they are not used by the New York Central, the Chicago, Burlington & Quincy, the Illinois Central, or the Nickel Plate. In 1899, the American Railway Master Mechanics Association, whose members represent nearly all the railroads in

the country, passed a resolution expressing the sense of the Association to be "that the use of fusible plugs in the crown sheets of locomotive fireboxes is not conducive to the prevention of the overheating of the crown sheet." It appears that, among practical men experienced in such matters, there is a difference of opinion as to the usefulness of such plugs. If the question whether the standard of duty fixed by the act required defendant to have a fusible plug in the crown sheet of the boiler were one for the determination of a jury, we think there was evidence which would sustain a verdict in the affirmative or in the negative. But we think the question was not for the jury. *Southern Pacific Co. v. Seley*, 152 U. S. 145, 150; *Tuttle v. Milwaukee Railway*, 122 U. S. 189, 194; *Randall v. Baltimore & Ohio R. R. Co.*, 109 U. S. 478, 483; *Kilpatrick v. Choctaw, O. & G. R. Co.*, 121 Fed. 11; *Richards v. Rough*, 53 Mich. 212, 216. And see *Southern Pacific Co. v. Berkshire*, 254 U. S. 415, 417. The act required a condition which would permit use of the locomotive without unnecessary danger. It left to the carrier the choice of means to be employed to effect that result. While the burden was on the plaintiff to prove a violation of the act by defendant, she was not bound to show that any particular contrivance or invention was suitable or necessary to have and keep the boiler in proper condition. There is a multitude of mechanical questions involved in determining the proper construction, maintenance and use of the boilers, other parts of locomotives, their tenders and appurtenances, all of which are covered by the Boiler Inspection Act, as amended. Inventions are occurring frequently, and there are many devices to accomplish the same purpose. Comparative merits as to safety or utility are most difficult to determine. It is not for the courts to lay down rules which will operate to restrict the carriers in their choice of mechanical means by which their locomotives, boilers, engine tenders and appurtenances

are to be kept in proper condition. Nor are such matters to be left to the varying and uncertain opinions and verdicts of juries. The interests of the carriers will best be served by having and keeping their locomotive boilers safe; and it may well be left to their officers and engineers to decide the engineering questions involved in determining whether to use fusible plugs or other means to that end. *Tuttle v. Milwaukee Railway*, *supra*, p. 194; *Richards v. Rough*, *supra*, p. 216. The presence or absence of a fusible plug was a matter properly to be taken into consideration in connection with other facts bearing upon the kind and condition of the boiler in determining the essential and ultimate question, i. e. whether the boiler was in the condition required by the act.

But we think the court erred in instructing the jury that defendant was bound to avail itself of "the best mechanical contrivances and inventions in known practical use which are or would be effective in making safe a locomotive boiler as against explosions," and also erred in authorizing the jury to decide that "the standard of duty imposed by the law required a fusible safety plug to be installed", and that "the absence of the fusible safety plug would impose upon the defendant here an absolute liability."

Judgment reversed.